

CLAIMS:

1. A structure control method comprising irradiating a mixture of nano-scale low-dimensional quantum structures of differing densities of states with an electromagnetic wave in an oxygen atmosphere, so as to selectively oxidize a low-dimensional quantum structure of a density of states resonating with the electromagnetic wave.

2. The structure control method as set forth in claim 1, wherein the mixture is irradiated with the electromagnetic wave so as to remove from the mixture the low-dimensional quantum structure of a density of states resonating with the electromagnetic wave.

3. The structure control method as set forth in claim 1 or 2, wherein the low-dimensional quantum structures comprise nanotubes or nanoparticles.

4. The structure control method as set forth in any one of claims 1 through 3, wherein the low-dimensional quantum structures comprise carbon or boron nitride.

5. The structure control method as set forth in any one of claims 1 through 4, wherein the low-dimensional quantum structures have a single-walled structure.

6. The structure control method as set forth in any one of claims 1 through 5, wherein the electromagnetic wave is a laser beam.

7. A producing method of a nano-scale low-dimensional quantum structure, comprising the step of irradiating a mixture

of nano-scale low-dimensional quantum structures of differing densities of states with an electromagnetic wave in an oxygen atmosphere, so as to selectively oxidize a low-dimensional quantum structure of a density of states resonating with the electromagnetic wave and thereby remove a structure with the density of states resonating with the electromagnetic wave.

8. A producing method of a nano-scale low-dimensional quantum structure, comprising the step of irradiating a mixture of nano-scale low-dimensional quantum structures of differing densities of states with an electromagnetic wave in an oxygen atmosphere, so as to selectively oxidize a low-dimensional quantum structure of a density of states resonating with the electromagnetic wave and thereby retain a structure with a density of states not resonating with the electromagnetic wave.